



SDI Review Form 1.6

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| Journal Name: | Asian Journal of Research and Review in Physics |
| Manuscript Number: | Ms_AJR2P_47561 |
| Title of the Manuscript: | Theoretical verification of the formula of charge function in time ($q = c*v$) for few cases of excitation voltage for a fractional capacitor and interpretation of results |
| Type of the Article | |

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

| | Reviewer's comment | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| <p>Compulsory REVISION comments</p> | <p>Title is far too long and confusing Change the title to: "Theoretical Verification of the Formula for Charge as a Function of Time for a Fractional Capacitor"</p> <p>Introduction page 1: Change "The voltage change when appears at a capacitor or dielectric, it reacts or relaxes via relaxation current." To: "The voltage, $v(t)$, across a capacitor or dielectric changes at a rate in proportion to the current: $I(t)=C^*dv/dt$."</p> <p>Introduction page 1: Change "This formulation $q(t)=c(t)*v(t)$ is deliberated and derived in detail" To: "This formula, $q(t)=c(t)*v(t)$, is derived in detail"</p> <p>Introduction page 1: Change "the operation (*) is convolution operator [1]" To: "the operation (*) is the convolution operator [1]"</p> <p>Introduction page 1: Change: "In this paper we will always take the power-exponent of power-law of decaying capacity function $C(t)=t^{(-\alpha)}$ i.e. alpha as between zero and one; i.e. $0<\alpha<1$" To: "In this paper we will always take the exponent, alpha, in the power-law decaying capacity function, $C(t)=t^{(-\alpha)}$, to be between zero and one: $0<\alpha<1$."</p> <p>Introduction page 1 to 2: Change: "This power-law decay function is in singular at origin and is in tune with singular power-law-decay relaxation current given by Curie-von Schweidler (universal law) of dielectric relaxation [2]-[5]" To: "This power-law decay function is singular at $t=0$ and is consistent with the singular power-law-decay relaxation current given by the Universal Dielectric Response (UDR) of Curie, von Schweidler & Jonscher[2]-[5]."</p> <p>Introduction page 2: Change "We will use the memory-effect [6], [7], [14], [15] via using this new formulation" To: "We will use the memory-effect [6], [7], [14], [15] using this new formulation"</p> <p>Introduction page</p> <p>I do not understand why $q(t)$ would be equal the convolution of $C(t)$ with $v(t)$ and not simply the integral of $C(t)*dv$: $q(t) = \text{integral of the current, } I(x), \text{ from } x = 0 \text{ to } t + q(0). I(x)=C(x)*dV/dx$ Hence, $q(t)=\text{integral of } C(x)*dv(x) \text{ from time } x=0 \text{ to time } x=t.$</p> <p>Use the word "via" or use the word "using" but not both.</p> | |



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| | https://en.wikipedia.org/wiki/Universal_dielectric_response | |
| Minor REVISION comments | | |
| Optional/General comments | | |

PART 2:

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| | Reviewer's comment | Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
| Are there ethical issues in this manuscript? | <i>(If yes, Kindly please write down the ethical issues here in details)</i> | |

Reviewer Details:

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|----------------------------------|--------------------------------|
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